

Surveillance, a Cornerstone for Bioterrorism Preparedness

00-406

A bioterrorist attack could come in the form of aerosols of Bacillus anthracis, Brucella melitensis, or Francisella tularensis released in the suburbs of a major city. The financial impact of such an event is likely to range from an estimated \$478 million to \$26 billion per 100,000 persons exposed. Rapid implementation of a postattack prophylaxis program is the single most important means of reducing these losses.¹ Delayed recognition and reporting of an attack could cost thousands of lives and millions to billions of dollars.

Texas residents expect local, regional, and state health departments to be prepared with a rapid response to bioterrorism (BT). A first step in making this expectation a reality is to ensure comprehensive reporting of notifiable conditions.

Current Reporting Process and Regulations

State statute requires health care providers, hospitals, laboratories, schools, and others to report information about patients who are suspected of having any of over 60 notifiable conditions (Title 25 Texas Administrative Code, Article 97 and Chapter 81 of the Health & Safety Code). In addition, outbreaks, exotic diseases, and unusual group expressions of disease must be reported. Currently about two-thirds of all disease reports are from hospital, reference, and public health laboratories. With the exception of a few laboratories that transmit positive test results in an electronic format, laboratories report on paper or by facsimile. About 37% of disease reports are from health care providers, hospitals, and schools, who use telephone, facsimile, and US mail to submit data to local health departments (LHDs) and regional offices. Except for seven LHDs and six regional offices that forward disease data electronically, LHDs and regional offices use these same methods to forward data to Austin.

Process Improvement Plans for 2000

First, the notifiable disease rules will be revised to ensure that putative BT agents are likely to be reported. Texas law presently requires reporting of the following diseases caused by agents potentially used for bioterrorism: anthrax, foodborne botulism, brucellosis,

cholera, plague, Venezuelan equine encephalitis, viral hemorrhagic fevers, and yellow fever. Other conditions that may result from an act of bioterrorism—Q fever, tularemia, and smallpox—are presently not reportable, but will be added to the list this year. Although some of these diseases are currently reportable on "a weekly basis," they will all become reportable "within one working day." To improve timeliness and sensitivity of reporting, TDH will encourage and facilitate electronic lab reporting by more LHDs, regional offices, and reference laboratories.

The TDH rapid FAX notification system provides public and private health care professionals with urgent public health information. However, facsimiles are currently distributed in a serial manner—one message at a time. Since this methodology is too slow to be effective during an act of bioterrorism, TDH is building broadcast fax capability. Moreover, new contacts, including infectious disease physicians, hospital emergency rooms, and medical examiners will be added to the current FAX notification list. TDH also is working on ways to enhance its capacity for emergency communications. Plans are underway to publicize the 24-hour-a-day telephone number for reporting notifiable conditions and develop a broadcast fax alert system. The telephone system, which averages 178 calls per month, provides area code/exchange routing that allows health professionals who call (800) 705-8868 to reach the nearest LHD or regional office. Widespread advertising could increase usage dramatically.

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Public Health Training

From December 1998 through March 1999, basic 'Reporting and Surveillance' workshops were conducted in Lubbock, Ft. Worth, Houston, Austin, El Paso, and Edinburg. The training covered basic concepts of reporting and surveillance. Three hundred sixteen individuals, including LHD and regional office staff, infection control practitioners, and medical professionals from clinics and schools attended these training sessions.

Workshop participants were asked to evaluate the course content and indicate future training needs. Of 216 persons who returned surveys, 137 indicated that additional training was necessary. Respondents suggested a variety of topics including 'investigating outbreaks' (70%), 'when to initiate a public health response' (64%), 'interpreting laboratory test results' (61%), and 'EpiInfo/NETTS' (57%). Fewer people requested 'response to BT activity,' 'promoting reporting in the private sector,' 'conducting patient interviews,' and 'media coordination during outbreaks.' Many respondents commented on the need for annual reporting and surveillance training sessions to provide information about changes in the reporting process and to train persons not able to attend this year's courses. Thus, training for LHD and regional offices staff planned for Spring 2000 will include workshops on when and how to initiate a public health response. A course pertaining to outbreak investigations relative to bioterrorism is planned for 2001.

Diseases or other adverse health conditions can be reported by calling the following toll-free number that automatically accesses the proper health authority: (800) 705-8868.

For additional information on reporting or any other aspect of disease surveillance or epidemiology in the state, call the TDH Infectious Disease Epidemiology and Surveillance Program (IDEAS) at (512) 458-7228 or visit the IDEAS reporting Web site at

<http://www.tdh.state.tx.us/ideas/report/report.htm>

Medical Education

To improve surveillance for possible bioterrorism events, TDH will create a Website that will contain information on putative bioterrorism agents with links to laboratory forms and illustrations of diagnostic gram stains and x-rays. Also in the works is a FAX-on-demand system to aid in the dissemination of generic surveillance materials as well as forms, diagnostic tools, and information related to bioterrorism. In addition, TDH has a website with links to other sources of bioterrorism information: www.tdh.state.tx.us/epidemiology/btfront.htm.

It is estimated that as many as 17 countries may have active research and development programs for biologic weapons.² Groups or individuals with grievances against the government or society have used or will attempt to use biologic weapons to further their causes. We must be prepared for this possibility occurring in Texas. Improved reporting of notifiable conditions can provide the edge needed to enable Texas health departments to meet their responsibility to protect the residents of this state against a bioterroristic attack.



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References

1. Kaufmann, AF, MI Meltzer, and GP Schmid. The Economic Impact of a Bioterrorist Attack: Are Prevention and Postattack Intervention Programs Justifiable? EID 1997; 3:1-19.
2. Cole LA. The specter of biological weapons. Sci Am 1996;275:60-5.

Reporting: What's the Score for 1999?

In 1998 the first yearly challenge was issued to the Texas Department of Health Public Health Regions (PHRs) to improve their reporting records from the previous year. The data are now available for the comparison of PHR case reports for 1997 and 1998.

Reported cases of notifiable conditions increased in all PHRs except 10 and 11. PHR 1, where the number of reports in 1998 were more than double the 1997, also had the greatest increase in the 1996-1997 comparison. Congratulations also go to PHRs 5S, 5N, and 2—each of which had increases of greater than 100%—and PHRs 7 and 9, with 70% increases each.

*Congratulations and thanks to everyone
who increased their reporting efforts.*

Happy New Year!!!

Case Report Comparison Among Public Health Regions 1997-1998

PHR	1997	1998	No.	%	↑/↓
1	1372	2006	634	46	↑
2	282	693	411	146	↑
3	3114	3572	458	15	↑
4	636	833	197	31	↑
5 North	109	289	180	165	↑
5 South	228	616	388	170	↑
6	3000	3455	455	15	↑
7	1746	3065	1319	75	↑
8	2084	2144	60	3	↑
9	341	580	239	70	↑
10	603	534	-69	-11	↓
11	2478	2183	-295	-12	↓

Remember!! Reporting is not voluntary—it is "the law."
Maintaining patient confidentiality is also a legal requirement.



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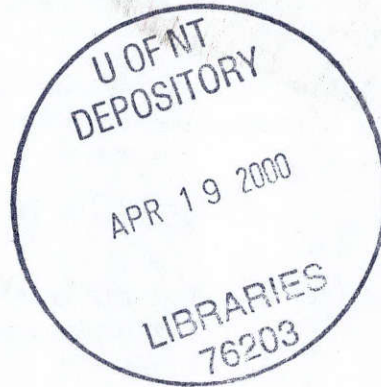
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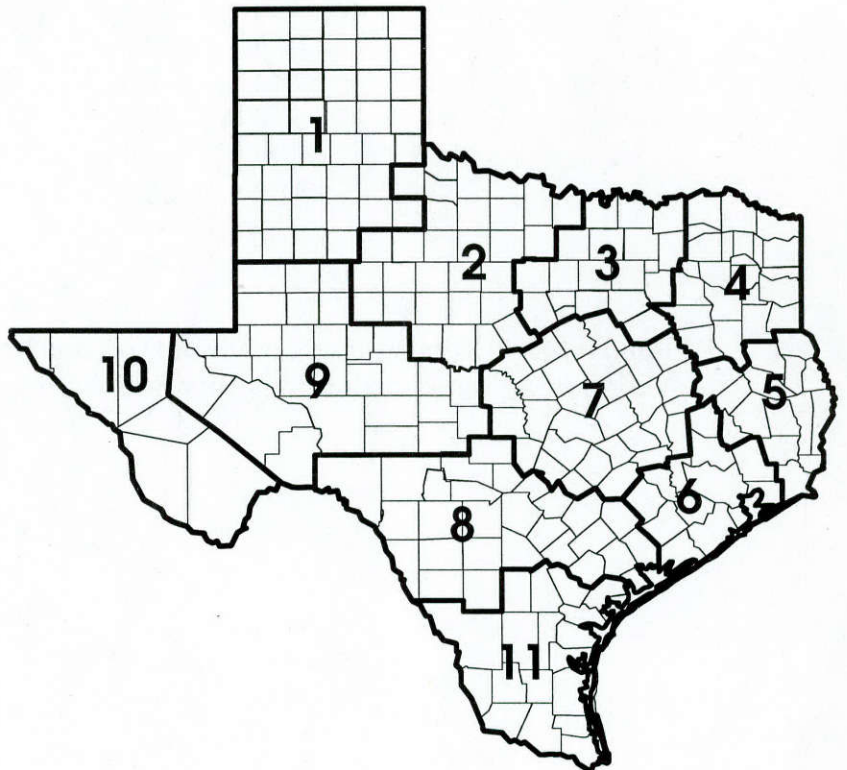
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